

WHAT IS CLAIMED IS:

- 1        1. An inspection coaxial probe, comprising:
  - 2              a conductive block, formed with a first face, a second face and a through hole connecting the first face and the second face;
  - 4              a contact probe, comprising:
    - 5                  a conductive pipe; and
    - 6                  a conductive plunger, retractably provided in at a first end of the pipe, the plunger being to be brought into contact with a device to be inspected; and
    - 9                  a first retainer, comprising a first insulative member through which the first end of the pipe is retained in the vicinity of the first face of the block, such that the pipe is coaxially held within the through hole while forming a gap between an outer periphery of the pipe and an interior wall of the through hole.
- 1        2. The inspection coaxial probe as set forth in claim 1, wherein:
  - 2              the first insulative member is a substrate provided on the first face of the block, and formed with a recess and a through hole communicated with the recess; and
  - 5              the first end of the pipe is fitted into the recess such that the plunger coaxially extends through the through hole of the substrate.
- 1        3. The inspection coaxial probe as set forth in claim 1, wherein:
  - 2              a first end portion of the through hole of the block is narrowed;
  - 3              the first insulative member is a spacer formed with a recess and a

4 through hole communicated with the recess; and

5 the first insulative member is inserted into the first end portion of the  
6 through hole and the first end of the pipe is fitted into the recess, such that the  
7 plunger coaxially extends through the through hole of the spacer and the  
8 through hole of the substrate.

1 4. The inspection coaxial probe as set forth in claim 1, further  
2 comprising a conductive plate, formed with a first recess and a first through  
3 hole communicated with the first recess, the plate being provided on the first  
4 face of the block, wherein:

5 the first insulative member is a spacer formed with a second recess  
6 and a second through hole communicated with the second recess; and

7 the first insulative member is inserted into the first recess and the first  
8 end of the pipe is fitted into the second recess, such that the plunger coaxially  
9 extends through the first through hole, the second through hole and the  
10 through hole of the block.

1 5. The inspection coaxial probe as set forth in claim 1, further  
2 comprising a second retainer, comprising a second insulative member through  
3 which a second end of the pipe is retained in the vicinity of the second face of  
4 the block,

5 wherein the contact probe is electrically connected to a wiring board  
6 on which an inspection circuit is provided via the second end of the pipe.

1       6.      The inspection coaxial cable as set forth in claim 5, wherein:  
2                  a first recess is formed on the second face of the block;  
3                  the second insulative member is a spacer formed with a second  
4                  recess and a through hole communicated with the second recess;  
5                  the spacer is fitted into the first recess and the second end of the pipe  
6                  is fitted into the second recess, such that the second end of the pipe is  
7                  electrically connected to the wiring board via the through hole of the spacer,  
8                  while the spacer is held by the wiring board within the first recess.

1       7.      An apparatus for inspecting an electrical characteristic of a device,  
2      the apparatus comprising:  
3                  the inspection coaxial probe as set forth in claim 1; and  
4                  a wiring board, on which an inspection circuit is provided, and to  
5                  which a second end of the pipe is electrically connected.